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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,638	12/21/2001	Charles J. Persico	010286	1499
23696	7590	10/13/2005	EXAMINER	
Qualcomm, NC 5775 Morehouse Drive San Diego, CA 92121			NGUYEN, THUAN T	
			ART UNIT	PAPER NUMBER

2685

DATE MAILED: 10/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/027,638	PERSICO, CHARLES J.	
	Examiner	Art Unit	
	THUAN T. NGUYEN	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 18-22 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 18-22, 28-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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DETAILED ACTION

Claim Rejections - 35 USC 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 18-22, and 28-32 are rejected under 35 U.S.C. 102(b) as being anticipated by Haugli et al. (U.S. Patent No. 5,914,944).

Regarding claim 1, Haugli discloses a method for receiving a first signal having a first frequency and receiving a second signal having a second frequency, the first and second frequency being different from a frequency of an incoming RF signal, i.e., as shown in Fig. 3, remote wireless terminals 20 communicate to station 11 via satellite 18 with links 19, links 19 are RF signals (col. 6/lines 10-35), and remote wireless terminals (as shown in Fig. 4), with a quadrature detector 56 provides two separate I and Q signals with different frequencies and they are also different in frequency to the received RF signals due to the fact of being downconverting to IF signals (col. 7/lines 5-37); and generating at least one local oscillator (LO) signal having a frequency determined as a function of the first and second frequencies, and at least one baseband signal as a function of the local oscillator and the RF signal is generated (Fig. 4, and col. 7/lines 5-37 for LO 64 and frequency synthesizer 55 in providing, and applying the LO oscillator signal to the quadrature detector 56 for generating baseband signal under the control of frequency controller 65; see further in Fig. 8, col. 11/lines 10-28 and the examiner's argument below).

As for claim 2, Haugli further discloses wherein the frequency of the local oscillator signal is one of a sum and a difference of the first and second frequencies, i.e., Figure 11 shows a computer algorithm in estimating the sum and the difference of the first and second frequencies as IF signals are transmitted in unique words or frames, and the error estimates are corrected for the voltage controlled LO reference crystal oscillator (col. 12/lines 32-64; and Fig. 8 for the discussion of the LO signal is one of the sum and a difference of the first and second frequencies with the examiner's argument below).

As for claim 3, Haugli further discloses wherein generating of the local oscillator signal comprises generating an in-phase LO signal and a quadrature LO signal (col. 7/lines 15-37; and col. 11/lines 10-38 for I and Q components).

As for claim 4, Haugli further discloses comprising applying the LO signal to convert the RF signal down to an in-phase baseband signal and a quadrature baseband signal (col. 7/lines 15-37 for downconverting to I and Q baseband signals; and col. 11/lines 10-38 for I and Q components).

As for claim 5, Haugli further discloses comprising a quadrature representation of at least one of the first and second signals (Fig. 4 for a quadrature detector 56 for the representation of at least one of the first and second signals).

Regarding claims 18-23 for the processor readable medium applied the same method, and claims 28-32 for an apparatus applied the same technique are rejected for the reasons given in the scope of claim 1-5 as discussed in details above.

Response to Arguments

3. Applicant's arguments filed on 7/25/05 have been fully considered but they are not persuasive.

Applicant argues that in claim 1, Haugli does not teach or suggest that the generating step at least one LO signal having a frequency determined as a function of the first and second frequencies. The examiner invites the applicant to take a closer look at Figure 8 as Haugli shows a clear circuitry with a reference oscillator 319 coupled to synthesized local oscillators 320, and with a 90 degree phase shifter 309, the circuitry produces or generates in-phase I and quadrature Q components of the signal as function of the first and second frequencies (refer to col. 11/lines 10-27). It is clear that I and Q signals at the outputs having different frequencies because of the 90-degree phase shifter; and it is also noted that the frequency of the synthesized local oscillators is adjusted under the microcontroller 310 (similar to Fig. 3 of the present application for generating I and Q baseband signal). Understood this concept, the next feature in claim 2 is realized due to the fact that the LO signal is provided to as a part of either the sum and/or the difference of the first and second frequencies of I and Q signals. Thus, the LO signal is said and read to be one of a sum and a difference of the first and second frequencies as disclosed by Haugli.

Therefore, the examiner respectfully disagrees with the applicant and stands with the disclosure and teaching of Haugli as disclosed and discussed in this final office action.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to the New Central Fax number:

(571) 273-8300, (for Technology Center 2600 only)

Hand deliveries must be made to Customer Service Window,
Randolph Building, 401 Dulany Street, Alexandria, VA 22314.

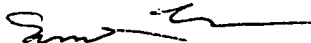
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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Thuan Nguyen whose telephone number is (571) 272-7895. The examiner can normally be reached on Monday-Friday from 9:30 AM to 7:00 PM, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tony T. Nguyen
Art Unit 2685
September 27, 2005


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600